

WAS5 PRO RTD

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Do not use product for new developments



RTD temperature signal converters for connecting resistance temperature sensors and analogue DC current or voltage outputs.

A variety of resistance thermometers (e.g., PT100) are used to measure temperature in an industrial environment. These are used with 2-, 3-, or 4-wire technology.

We distinguish here between PTC and NTC thermistors. For an exact temperature measurement, the resistance value must be logged, linearised and converted into an analogue signal proportional to the temperature.

Signal isolating converters carry out these important functions. They isolate signals between the harsh industrial environments and the downstream electronics. Furthermore, they compensate for potential differences caused by long cable lengths.

Sensor-related inadequacies such as cold joints and linearity errors are also minimised.

General ordering data

Version	RTD isolating transformer, 2-/3-/4- wire RTD, Configurable, Input : Temperature, PT100, Output : 0(4)-20 mA, 0-10 V
Order No.	8560700000
Type	WAS5 PRO RTD
GTIN (EAN)	4032248207312
Qty.	1 pc(s).
Delivery status	This article will no longer be available in the future.
Available until	2021-06-30
Alternative product	1176030000

WAS5 PRO RTD

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Dimensions and weights

Depth	112.4 mm	Depth (inches)	4.425 °C
Width	17.5 mm	Width (inches)	0.689 °C
Length	92.4 mm	Length (inches)	3.638 °C
Net weight	138 g		

Temperatures

Storage temperature	-20 °C...85 °C	Operating temperature	0 °C...55 °C
---------------------	----------------	-----------------------	--------------

Probability of failure

MTTF	270 GB
------	--------

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
------------	----------------

Input

Line resistance in measuring circuit	50 Ω for 3- and 4-conductor	Number of inputs	1
Sensor	PT100/2-/3-/4-wire, Ni100/2-/3-/4-wire, potentiometer: min. 100 Ω, max. 100 kΩ, resistance: 0-450 Ω	Temperature input range	Configurable, PT100: -200°C...850 °C, NI100: -60°C...+250 °C

Output

Fine adjustment	≥ ± 5 %, Version 1 and later: ≥ 12.5 % / potentiometer: 12.5%...25%	Load impedance current	≤ 600 Ω
Number of outputs	1	Offset current	max. 100 µA
Offset voltage	max. 0.05 V	Output current	0...20 mA, 4...20 mA
Output voltage, note	0...10 V	Status indicator	Module active: LED on/ wire breakage: LED flashing/Error: LED off
Wire break detection	LED flashing (output value: > 20 mA, >10 V)	load impedance voltage	≥ 1 kΩ

General data

Accuracy	< 0.3 % of measured value	Configuration	DIP switch, Potentiometer
Current-carrying capacity of cross-connect.	≤ 2 A	Galvanic isolation	3-way isolator
Input/Output	configurable	Linearity	Yes
Power consumption	830...880...980 mW at I _{OUT} = 20 mA	Rail	TS 35
Step response time	fast/slow: 2-/3-/4-conductor: 1.2 s/2.2 s; potentiometer: 0.5 s/1.1 s	Temperature coefficient	Measuring range ≥ 200 K: ≤ 200 ppm/K 100 K <= measuring range < 200 K: <= 250 ppm/K 40 K <= measuring range < 100 K: ≤ 400 ppm/K
Type of connection	Screw connection		

WAS5 PRO RTD

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Insulation coordination

Clearance & creepage distances	≥ 3 mm	EMC standards	EN 55011, EN 61000-6
Galvanic isolation	3-way isolator	Impulse withstand voltage	4 kV
Insulation voltage	2 kV _{eff} / 5 s	Insulation voltage input or output/rail	4 kV _{eff} / 1 min.
Insulation voltage input or output/supply	2 kV _{eff} / 5 s	Pollution severity	2
Rated voltage	300 V	Surge voltage category	III

Connection data

Type of connection	Screw connection	Stripping length, rated connection	7 mm
Tightening torque, min.	0.4 inch	Tightening torque, max.	0.5 inch
Clamping range, rated connection	2.5 Nm	Clamping range, min.	0.5 Nm
Clamping range, max.	2.5 Nm		

Classifications

ETIM 6.0	EC002919	ETIM 7.0	EC002919
ETIM 8.0	EC002919	ECLASS 9.0	27-21-01-29
ECLASS 9.1	27-21-01-29	ECLASS 10.0	27-21-01-29
ECLASS 11.0	27-21-01-29		

WAS5 PRO RTD

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Technical data

Tender specification sheets

Long specification

Short specification

**RTD measurement
 isolating transformer;
 configured with DIP
 switches**
**RTD measurement
 isolating transformer
 in 17.5 mm width with
 external power supply,
 for transmitting and
 isolating PT100 and
 Ni100 2-/3-/4-wire
 signals, resistors and
 potentiometer signals.**
**Analogue DC signals
 0(4) to 20 mA / 0 to 10
 V are available on the
 output side.**
**Zero/span
 compensation with
 potentiometer.**
**Add-on housing for
 TS35 rail mounting**
Dimensions: L/W/H
92.4/ 17.5/ 112.4 mm
Screw connection /
Nominal cross-section
2.5 mm²
Protection degree: IP
20
Input PT100,
Ni100 2-/3-/4-wire

Resistance
0...450 Ohm/
Potentiometer100
Ohm...100
kOhm
Output
0/4...20 mA

0...10 V
Load resistance
< 600 Ohm/ Strom/> 1
kOhm/ voltage
Transmission
error < 0,8 % v. E.
(RTD)

200 ppm / °C
Auxiliary
power
24 VDC +/- 25 %
Power loss approx. 0.9
W
Ambient
temperature range
0°C...+55 °C

Isolation
EN 50178, 3-way
isolation up to 4 kV
AC/DC of all circuits
against each other
Test
voltage 4
kV input against output
Rated
voltage
300 V AC/DC at
overvoltage category III

**RTD measurement
 isolating transformer;
 configured with DIP
 switches**
**RTD measurement
 isolating transformer
 in 17.5 mm width with
 external power supply,
 for transmitting and
 isolating PT100 and
 Ni100 2-/3-/4-wire
 signals, resistors and
 potentiometer signals**

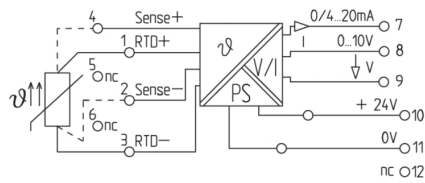
WAS5 PRO RTD

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

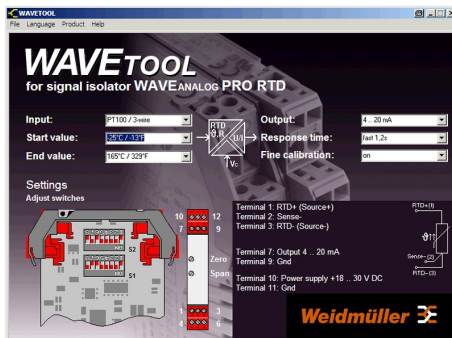
www.weidmueller.com

Drawings

Electric symbol



Similar to illustration



Screenshot example, Wave tool software